



Appendix F

Sprint Outage Prevention Program

Appendix F: Sprint Route Outage Prevention Programs

Call Before You Dig Program

This program uses a nationwide 800 number interlinked with all local/state government utility agencies as well as contractors, rail carriers, and major utilities. Sprint currently receives in excess of 60,000 calls per month for location assistance over the 23,000-mile fiber network.

Awareness Program

This Sprint program proactively contacts local contractors, builders, property owners, county/city administrators, and utility companies to educate them on Sprint's cable locations and how each can help eliminate cable outages.

Route Surveillance Program

This is a Network Operations department program using Sprint employees to drive specific routes (usually 120 miles) and visually inspect the fiber cable routes. This activity is performed an average of 11.6 times per month or approximately once every 2-3 days.

Technician Program

Technicians are stationed at strategic locations and cover an area averaging 60 route miles. Each technician has emergency restoration material to repair fiber cuts on a temporary basis. Other operations forces within a nominal time frame accomplish total repair.

Fiber/Switch Trending Program

This includes a weekly summary of equipment failure events highlighting bit error rate (BER) and cable attenuation. As a result, Sprint identifies potential equipment problems and monitors performance degradation to establish equipment-aging profiles for scheduled repair, replacement, or elimination. Aging profiles are computer-stored representations of the characteristics of a fiber splice. The profile is stored at the time the splice is accepted and put into service. A comparison of the original profile and current profile are compared for performance degradation. Maintenance is scheduled based on this type of monitoring.

Network Management and Control Systems

The Sprint network is managed and controlled by a National Operations Control Center (NOCC) located in Overland Park, KS. As a back up, a secondary NOCC is located in Lenexa, KS. The NOCC is designed to provide a national view of the status of the network as well as to provide network management from a centralized point. The NOCC interfaces with the Regional Control Centers (RCCs) to obtain geographical network status. The RCCs are responsible for maintenance dispatch and trouble resolution, and are designed to provide redundancy for each other and back-up status for the NOCC.

The NOCC and RCC work closely with the ESOCC in cases where a network problem may affect WATRS operations. In cases such as these, the NOCC or RCC immediately alerts the ESOCC of the situation so that appropriate steps can be taken to minimize service impacts. The NOCC and RCCs also serve as reference points for the ESOCC when problems are detected in the TRS Center that is not the result of internal Center operations.

Network Management

Commitment to a digital fiber optic network permits Sprint to use a single transmission surveillance protocol to integrate internal network vendor equipment. This enhances Sprint's ability to automate and provide preventive, near real-time detection and isolation of network problems. The controlling principle is identification and correction of potential problems before they affect the WATRS call capabilities.

Sprint divides the major functional responsibilities, facilities maintenance and network management, into a two-level organization which maximizes network efficiencies and customer responsiveness. The first level consists of the RCCs located in Atlanta and Sacramento. RCC personnel focus on the performance of individual network elements within predetermined geographical boundaries. The second level is the NOCC in Kansas City that oversees traffic design and routing for Sprint's 23,000-mile fiber optic network and interfaces.

This two-level operational control organization, combined with architectural redundancies in data transport and surveillance, control and test systems, ensures an expedited response to potential problems in both switched and private line networks.

In the event of a power outage, the UPS and backup power generator ensure seamless power transition until normal power is restored. While this transition is in progress, power to all of the basic equipment and facilities essential to the Center's operation is maintained. This includes:

- Switch system and peripherals
- Switch room environmentals
- CA positions (consoles/terminals and emergency lights)
- Emergency lights (self-contained batteries)
- System alarms
- CDR recording

As a safety precaution (in case of a fire during a power failure), the fire suppression system is not electrically powered. Once the back-up generator is on line, stable power is established and maintained to all TRS system equipment and facility environmental control until commercial power is restored.

CAPTEL OUTAGE PREVENTION

Sprint will provide FCC compliant *CapTel* service from the two *CapTel* Service Centers in Madison and Milwaukee, WI. Sprint's *CapTel* vendor *CapTel Inc. (CTI)* operates the two current *CapTel* Service Centers in the nation. These unique Centers operate with enough terminals for 200 agents each, along with support personnel, Technicians, and Supervisors.

Both *CapTel* Service Centers are equipped with redundant systems for power, ACD/telecom switching equipment, call processing servers, data network servers, and LAN gear. Most equipment failures can be corrected without complete loss of service.

Having two *CapTel* Service Centers ensures minimum interruptions in service if something unexpectedly halts operations in one Center or the other such as a flood or a tornado. In those instances, traffic from one Center can automatically be routed to the other.